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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/676,350	RAMANATHAN, GOVINDARAJ	
	Examiner	Art Unit	
	MARY C. JACOB	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 November 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *10-12* is/are allowed.

6)☒ Claim(s) *1-9 and 13-16* is/are rejected.

7)☒ Claim(s) *17* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The response filed on 11/7/08 has been received and considered. Claims 1-17 are presented for examination.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/7/08 has been entered.

Claim Objections

3. The objections to claim 13, recited in the 5/8/08 Office Action has been withdrawn in view of the amendments to the claims filed 11/7/08.

4. Claim 13 is objected to because of the following informalities. Appropriate correction is required.

5. Claim 13, lines 1-3 recites, "Computer-readable media having stored thereon a software framework of a generic device emulator for execution on a computer to provide emulation of an operation of a device...". It would be better if it was written, "Computer-readable media having stored thereon a software framework of a generic device

emulator, that when executed on a computer, provides emulation of an operation of a device…".

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. **Claims 1-3, 13, 15 and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over by Kim et al ("Design and Implementation of Home Network Systems Using UPnP Middleware for Networked Appliances", IEEE Transactions on Consumer Electronics, Volume 48, Issue 4, Nov 2002, page(s): 963 – 972) in view of Hite et al (US Patent 7,213,061).

8. As to **Claim 1**, Kim et al teaches: a method of emulating devices communicating through a device connectivity protocol, the method comprising: processing, in a device emulator a description of a device to be emulated in the device connectivity protocol, the description specifying a set of actions of the device to be emulated (Table 2; page 965, column 1, paragraph 1, "…appliance emulators used to implement the home network system…"; Section 4.2, paragraph 1, specifically, "…These appliance emulators can be operated on a UPnP-enabled embedded device or PC..."; Figures 9 and 10 and descriptions); in response to receiving an action request from a control point at the device emulator per the device connectivity protocol (page 965, column 1,

paragraph 4, lines 4-6, "When the user invokes an action service…a message is sent to invoke the action…"; page 966, column 1, paragraph 1, lines 3-5, "The control point sends a discovery request to a newly connected home appliance…"; page 966, column 1, paragraph 2, "The user control point (UCP) requests a description document…"; page 966, column 2, paragraph 2, "…In step 3, the UCP requests additional information…In Step 5, the user can completely control and monitor the appliance using the User Interface…"), checking the action request against the device description in the device emulator to validate which action out of the set of actions specified in the description the action request matches (page 965, column 1, paragraph 4, "…a message is sent to invoke the action. When successful, the updated state variables are displayed…"; Figure 2, "Action Invocation" loop, "Service State Variable related action Query"; section 4.2, paragraph 4, lines 5-6); and upon validating an action to which the action request matches, producing, at the device emulator, a default response, the response based on the description such that, through the response the device emulator emulates operation of the device to be emulated (page 965, column 1, paragraph 4, "…a message is sent to invoke the action. When successful, the updated state variables are displayed…"; Figure 2, "Action Invocation" loop, "Service State Variable related action Query and Display").

9. As to **Claim 13**, Kim et al teaches: computer-readable media having stored thereon a software framework of a device emulator for execution on a computer to provide emulation of an operation of a device within a device connectivity architecture consistent with a textual description of the device, wherein the description of the device

specifies data formats of requests and responses for a set of actions that the device is capable of (page 965, column 1, paragraphs 1 and paragraph 2, lines 5-8, "…appliance emulators used to implement the home network system…", "…The user receives information about the services and actions of the home appliances…"; Section 4.2, paragraph 1, specifically, "…These appliance emulators can be operated on a UPnP-enabled embedded device or PC..."; Figure 9; page 967, column 1, paragraph 3; Figure 10, "dataType"), the device emulator comprising: program code for, within the device emulator, receiving action requests directed to the device from a control point within the device connectivity architecture (page 965, column 1, paragraph 4, lines 4-6, "When the user invokes an action service…a message is sent to invoke the action…"; page 966, column 1, paragraph 1, lines 3-5, "The control point sends a discovery request to a newly connected home appliance…"; page 966, column 1, paragraph 2, "The user control point (UCP) requests a description document…"; page 966, column 2, paragraph 2, "…In step 3, the UCP requests additional information…In Step 5, the user can completely control and monitor the appliance using the User Interface…"; Section 4, paragraph 3, "...home appliance control..."); program code for, within the device emulator, checking an action request, received from a control point, against the description to validate whether the action request matches that of an action specified in the description (page 965, column 1, paragraph 4, "…a message is sent to invoke the action. When successful, the updated state variables are displayed…"; Figure 2, "Action Invocation" loop, "Service State Variable related action Query"; section 4.2, paragraph 4, lines 5-6) and program code for, within the device emulator, performing a default

behavior producing a response for the action consistent with the data format specified in the description, thereby emulating operation of the device for the action (page 965, column 1, paragraph 4; Figure 2, "Action Invocation" loop", Service State Variable related action Query and Display"; page 967, paragraph 3; Figure 10, "dataType").

10. Kim et al does not expressly teach wherein the device emulator is a generic device emulator capable of emulating more than one device based on device descriptions.

11. Hite et al teaches a system and method of an Internet control network that eliminates or substantially reduces the disadvantages of prior control systems by allowing boundaries between the Internet and the control area network to become transparent (column 1, lines 28-35) wherein Internet appliances (Figure 1, elements 37-39; column 3, lines 31-48) communicate via a device connectivity protocol in a control area network (Figure 1, element 34; column 5, lines 48-65), receive action requests from a control point (Figure 1, element 36, "master controller"; column 3, lines 21-30) and wherein the network includes a generic device emulator capable of emulating more than one device based on device descriptions (column 6, lines 5-8, 22-27 and lines 33-40, "...a software device emulator 90 that is operable to spawn one or more software logical devices 86, which are software representations of devices connected to the control area networks...").

12. Kim et al and Hite et al are analogous art since they are both directed to emulating appliances in a device connectivity protocol.

13. It would have been obvious to one or ordinary skill in the art at the time the invention was made to modify the device emulator as taught in Kim et al to be a generic device emulator capable to emulating more than one device based on device descriptions as taught in Hite et al since Hite et al teaches a system and method of an Internet control network that eliminates or substantially reduces the disadvantages of prior control systems by allowing boundaries between the Internet and the control area network to become transparent (column 1, lines 28-35).

14. As to **Claim 2**, Kim et al as modified by Hite et al teaches: wherein producing the default response comprises producing a response message containing a default value consistent with a data type specified for a return parameter of the action in the description (Kim et al: page 965, column 1, paragraph 4; page 967, column 1, paragraph 3; Figure 10, "dataType").

15. As to **Claim 3**, Kim et al as modified by Hite et al teaches: wherein the validated action has a set of input and output parameters corresponding to state variables of the device (Kim et al: page 965, column 1, paragraph 4; section 4.2, paragraph 4, last sentence, "in the action services, the values of the state variables are changed by the user") and wherein producing the default response comprises: setting the corresponding state variables of the device to values of the respective input parameters contained in the action request (Kim et al: page 968, column 2, last sentence); producing a response with output parameters set to values of the corresponding state variables of the device (Kim et al: page 965, column 1, paragraph 2, lines 6-8 and paragraph 4); and producing

an eventing message if the action modified any evented variables (Kim et al: page 965, column 1, paragraph 4; page 967, column 2, last sentence).

16. As to **Claim 15**, Kim et al as modified by Hite et al teaches: wherein performing the default behavior comprises producing a response message containing a default value consistent with the data format of the response specified for the action in the description (Kim et al: page 965, column 1, paragraph 4, "…a message is sent to invoke the action. When successful, the updated state variables are displayed…"; page 967, column 1, paragraph 3; Figure 10, "dataType').

17. As to **Claim 16**, Kim et al as modified by Hite et al teaches: wherein the program code for performing the default behavior for the action in which the data format of the request and response has a set of input and output parameters corresponding to state variables of the device comprises: program code for setting the corresponding state variables of the device to values of the respective input parameters contained in the action request (Kim et al: page 968, column 2, last sentence); and program code for producing the response with output parameters set to values of the corresponding state variables of the device (Kim et al: page 965, column 1, paragraph 2, lines 6-8 and paragraph 4).

18. **Claims 4, 5 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al in view of Hite et al as applied to claim 1 above, further in view of Kumar et al (US Patent 7,017,148).

19. Kim et al as modified by Hite et al teaches processing in a device emulator a description of a device to be emulated in a device connectivity protocol, the description specifying a set of actions of the device to be emulated, validating in the device emulator which action out of the set of actions specified in the description the action request matches and upon this validation, producing a default response at the device emulator.

20. Kim et al as modified by Hite et al does not expressly teach (claim 4) providing hooks to interface user-provided action response implementations, if any, for one or more of the set of actions; upon validating the action request to match the action, first checking whether there is a user provided action response implementation for the action; producing the default behavior response consistent with the description of there is no user-provided action response implementation and otherwise performing the user-provided action response implementation for the action; (claim 5) wherein the hooks interface user-provided action response implementation of at least one action out of the set of actions but not every action out of the set of actions; (claim 14) providing hooks to interface user-provided action response implementations, if any, for the set of actions; upon validating the action request to match the action, first checking whether there is a user provided action response implementation for the action; producing the default behavior response consistent with the description of there is no user-provided action response implementation and otherwise performing the user-provided action response implementation for the action.

21. Kumar teaches a method and apparatus for UPnP device code generation that provides a time and cost effective solution for developing UPnP devices by eliminating stages of the software development cycle and allows the device developer to focus their attention on application-specific problems instead of worrying about UPnP (column 23, lines 13-34), wherein hooks are provided to interface user-provided action response implementations of at least one action out of the set of actions, but not every action out of the set of actions (column 6, line 28-column 7, line 14, "…Add actual implementation code here…", "…the developer is only required to write the portion of the code to handle the function or event, while code to handle the underlying UPnP functionality is automatically generated…", "…ideally, the developer will have to write only application-specific code...") wherein the developer is only required to write the portion of code to handle a particular function or event (user-provided action response implementation) while the code to handle the underlying UPnP functionality is automatically generated (default behavior).

22. Kim et al as modified by Hite et al and Kumar are analogous art since they are both directed to UPnP devices and their XML descriptions.

23. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of processing of a description in a device in a device connectivity protocol to produce a default response/behavior to emulate a device in a connectivity protocol as taught in Kim et al as modified by Hite et al to provide hooks to interface user-provided action response/behavior implementations as taught in Kumar since Kumar teaches a method and apparatus for UPnP device code generation

that provides a time and cost effective solution for developing UPnP devices by eliminating stages of the software development cycle and allowing the device developer to focus their attention on application-specific problems instead of worrying about UPnP (column 23, lines 13-34). Further, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the processing of the description document for a UPnP device as taught by Kim et al as modified by Hite et al (Kim et al: Section 4.2, paragraph 1; Figures 9 and 10 and descriptions) would determine if there is a user-provided action response/behavior and produce the default response/behavior if there is no user-provided action response/behavior implementation or otherwise perform the user-provided action response/behavior implementation for the action since the description document will be processed in the same way regardless of how the actions have been specified. The processing will determine which action out of the set of actions in the description document matches the action request and perform the matching behavior whether it is a default behavior or a user-defined behavior.

24. **Claims 6-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al as modified by Hite et al as applied to claim 1 above, and further in view of Skingsley et al (US Patent 6,697,751).

25. Kim et al as modified by Hite et al teaches the testing of emulated devices in a device connectivity protocol (Kim et al Figure 15).

26. Kim et al as modified by Hite et al does not expressly teach (claim 6) applying a defect behavior to messages produced to emulate the device to be emulated in the

device connectivity protocol; (claim 7) wherein the defect behavior is applied to packets of a particular type; (claim 8) wherein applying the defect behavior comprises invoking a user-provided implementation of the defect behavior; (claim 9) and randomly applying a defect behavior out of a set of defect behaviors to messages produced to emulated the device to be emulated in the device connectivity protocol.

27. Skingsley et al teaches an apparatus for testing and/or monitoring the transmission of data packets by communications equipment including an emulator that simulates a variety of network conditions for a variety of packets that embed a range of protocols and over a range of types of networks (column 12, lines 31-33) that subjects packets to errors thereby allowing applications to review their methods for handling such network interruptions which is valuable since present methods of testing network software may not expose potential failures (column 12, lines 38-43), wherein the emulator (701) (claims 6, 7) applies defect behavior to messages produced from a device in the device connectivity protocol to emulate the device in the device connectivity protocol, wherein the defect behavior is applied to the packet of a particular type (column 4, lines 1-12, packets built and sent according to a particular protocol; column 12, lines 26-41 and lines 50-60, packets intercepted between source and destination machine and defect behavior is applied to the messages; column 13, lines 51-61, types of defects applied to messages); (claim 8) wherein applying the defect behavior comprises invoking a user-provided implementation of the defect behavior (column 1, lines 56-58; column 3, lines 52-54; column 6, lines 55-64; column 14, lines 22-29); and (claim 9) and randomly applying a defect behavior out of a set of defect

behaviors to messages produced to emulate the device in the device connectivity protocol (column 13, lines 63-66, the packets that are interfered with are selected randomly).

28. Kim et al as modified by Hite et al and Skingsley et al are analogous art since they are both directed to the testing of network devices in a device communications protocol.

29. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the testing of emulated devices in a device connectivity protocol as taught by Kim et al as modified by Hite et al to include applying defect behavior to messages produced to emulate the device to be emulated in the device connectivity protocol, wherein the defect behavior is applied to packets of a particular type, wherein applying the defect behavior comprises invoking a user-provided implementation of the defect behavior, and randomly applying a defect behavior out of a set of defect behaviors to messages produced to emulate the device to be emulated in the device connectivity protocol as taught in Skingsley et al since Skingsley et al teaches an apparatus for testing and/or monitoring the transmission of data packets by communications equipment including an emulator that simulates a variety of network conditions for a variety of packets that embed a range of protocols and over a range of types of networks (column 12, lines 31-33) that subjects packets to errors thereby allowing applications to review their methods for handling such network interruptions which is valuable since present methods of testing network software may not expose potential failures (column 12, lines 38-43).

Allowable Subject Matter

30. Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

31. Claims 10-12 are allowed.

32. The following is an examiner's statement of reasons for allowance: While Skingsley et al (US Patent 6,697,751) teaches an apparatus for testing an monitoring the transmission of data packets by communications equipment including an emulator that simulates a variety of network conditions for a variety of packets that embed a range of protocols and over a range of types of networks wherein defective behaviors are applied to packets transmitted into the network, UPnPIC ("UPnP Device Certification Process Document", Version 1.0, 2001) teaches the certification testing of a UPnP device including protocol, syntax and semantic tests wherein the tests confirm if a device properly responds with an error to a specific action and teaches that device descriptions are written in XML, and Kim et al ("Design and Implementation of Home Network Systems Using UPnP Middleware for Networked Appliances", IEEE Transactions on Consumer Electronics, Volume 48, Issue 4, Nov 2002, page(s): 963 – 972) teaches the testing of emulated devices in a device connectivity protocol wherein the emulated devices are UPnP devices described in XML tagged text, **none of these references taken either alone or in combination with the prior art of record disclose** a method for emulating devices communicating through a device connectivity

protocol, specifically including

(claim 10) "…reading a device defect configuration file representing in a tagged text format at least one defect behavior to be applied to a type of packet transmitted as part of a message for a device emulated per the device connectivity protocol..."

"…upon production of a valid packet...the valid packet being of a type for which a defect behavior is represented in the device defect configuration file...applying the defect behavior to the valid packet to create an invalid packet for the emulated device…",

in combination with the remaining elements and features of the claimed invention. It is for these reasons that the Applicant's invention defines over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

33. Applicant's arguments filed 11/7/08 with regard to Claims 1- 9, 13-16 have been fully considered but they are not persuasive.

34. As to **Claim 13**, Applicant argues that the Kim reference does not teach or suggest "within the generic device emulator, receiving an action request directed to the device from a control point" and "within the generic device emulator, checking an action

request, received from a control point, against the description", because "the home server is not an appliance emulator" and addresses,"interaction with a user not a control point" (page 9, first paragraph). Specifically, Applicant argues that the cited passages of Kim refer to actions undertaken by the "Home Server Program" and does not teach or suggest "receiving action requests directed to the device from a control point" and "checking an action request, received from a control point, against a description" as recited by the claim (page 9, paragraph 2).

The Examiner respectfully disagrees. The limitation regarding the "control point" was amended into the claim limitations and is treated with art above. The Examiner cited the following: page 966, column 1, paragraph 1, lines 3-5, "The control point sends a discovery request to a newly connected home appliance…"; page 966, column 1, paragraph 2, "The user control point (UCP) requests a description document…"; page 966, column 2, paragraph 2, "…In step 3, the UCP requests additional information…In Step 5, the user can completely control and monitor the appliance using the User Interface…". These passages cited by the Examiner clearly set forth that a control point, whether it be a "user" control point, or some other control point such as the computer running and implementing the server program that processes the user requests, sends requests to the appliance emulator. The action request sent by the control point invokes actions at the emulator, and the emulator produces a response (page 965, paragraph 4). Therefore, the request for an action invocation is received at the appliance emulators from a control point.

35. Applicant argues that the Action appears to find actions of the claimed “generic device emulator” in Kim’s description of the “home server program” (page 9, paragraph 3).

The Examiner respectfully disagrees. First, although the Examiner, as stated in prior Office Actions, believes that the teachings of Kim teach a “generic device emulator” that provides “emulation of an operation of a device” as set forth in Applicant's claim 13, and set forth a teaching of “a generic device emulator able to emulate more than one device”, the Examiner has revised the rejection of claim 13 to show a specific teaching of a “generic device emulator” (see citations to Hite). The Examiner cites Table 2 and page 965, column 1, paragraph 1 which sets forth the appliance emulators “used to implement the home network system”, Section 4.2, paragraph 1, that sets forth the appliance emulators disclosed “can be operated on a UPnP-enabled embedded device or PC..." as well as Figures 9 and 10 showing the XML description of a particular device emulator and a graphical user interface showing various device emulators. These are the cited passages the Examiner relies upon to show Kim teaching a “generic device emulator". As to the “home server program" as shown in Figure 2 of Kim, requests sent to a particular device emulator and actions taken at the device are shown. These actions taken at the emulated device based on a request sent to the emulated appliance via a control point show actions taken by the generic device emulator as described by the above citations. It is the Examiner's position that the *program* described in Figure 2 does not actually perform the actions specified by the requests, the *emulator* performs the actions and updates the variables.

36. Applicant argues that the cited passages do not teach or suggest "receiving action requests…from a control point" because it merely describes receiving action invocations from a user", and that there is no discussion in Kim that these interactions are between a generic device emulator and a control point as recited in the amended claim (page 9, last paragraph-page 10, first paragraph).

The Examiner respectfully disagrees. As discussed above, the limitation regarding the "control point" was amended into the claim limitations and is treated with art above. The Examiner cited the following: page 966, column 1, paragraph 1, lines 3-5, "The control point sends a discovery request to a newly connected home appliance…"; page 966, column 1, paragraph 2, "The user control point (UCP) requests a description document…"; page 966, column 2, paragraph 2, "…In step 3, the UCP requests additional information…In Step 5, the user can completely control and monitor the appliance using the User Interface…". These passages cited by the Examiner clearly set forth that a control point, whether it be a "user" control point, or some other control point such as the computer running and implementing the server program that processes the user requests, sends requests to the appliance emulator. The action request sent by the control point invokes actions at the emulator, and the emulator produces a response (page 965, paragraph 4). Therefore, the request for an action invocation is received at the appliance emulators from a control point.

37. Applicant argues that the description of the appliance "emulators" do not satisfy the requirements of 102 (page 10, paragraph 2).

The Examiner respectfully disagrees. The cited sections of Kim clearly set forth

appliance "emulators" (Table 2; page 965, column 1, paragraph 1, "…appliance emulators used to implement the home network system…"; Section 4.2, paragraph 1, specifically, "…These appliance emulators cab be operated on a UPnP-enabled embedded device or PC..."; Figures 9 and 10 and descriptions).

38. Applicant argues that it is inconsistent to find both the "checking an action request" and "receiving an action request" language in different devices in the Kim publication when the claim language puts both in the recited "generic device emulator" (page 10, paragraph 2).

It is the Examiner's position that the "checking" of an action request against the device description and the "receiving an action request" is done both by the appliance emulator, not at two different devices. Specifically, a user request is sent to the device to invoke the action, and the device performs the action and updates the state variables "...a message is sent to invoke the action..." (page 965, paragraph 4). Further, the is the emulators that contain the descriptions of the device and the services (as shown and described on page 967 and in Figure 10). Therefore, the performing of the actions and updating of the state variables is performed by the emulators in response to action requests received.

39. Applicant argues that for reasons discussed in previous prosecution, the whole of the "generic device emulator" language in claim 13 is not taught or suggested by the "appliance emulators" described by Kim (page 10, paragraph 2).

As discussed above, the Examiner has revised the rejection of claim 13 to show

a specific teaching of a “generic device emulator”. It is the Examiner’s position that the cited art of Kim as modified by Hite teach or suggest the limitations of claim 13.

40. As to **Claims 1-3**, Applicant argues that Kim does not teach or suggest the language of claim 1 for the reasons discussed above for the rejection of claim 13. Further, Applicant argues that Hite does not address device emulation (page 11).

The Examiner respectfully disagrees. The arguments with respect to claim 13 have been addressed above. Further, it is the Examiner’s position that the teachings Hite clearly set forth device emulation (column 6, lines 5-8, 22-27 and lines 33-40, “...a software device emulator 90 that is operable to spawn one or more software logical devices 86, which are software representations of devices connected to the control area networks...").

41. As to **Claims 4 and 5**, Applicant argues that for reasons previously discussed with regards to claim 1, the limitations of claims 4 and 5 are not taught or suggested by Kim as modified by Hite in view of Kumar and that relevant disclosure is not found in the Kumar patent (page 14).

The Examiner respectfully disagrees. The arguments with respect to claim 1 have been addressed above.

42. As to **Claims 6, 7 and 9,** Applicant argues that for reasons previously discussed above with regard to claim 1, the limitations of claims 6, 7, and 9 are not taught or suggested by the combination of Kin and Hite, and that relevant disclosure is not found in Skingsley (page 14).

The Examiner respectfully disagrees. The arguments with respect to claim 1 have been addressed above.

43. As to **Claim 14**, Applicant argues that for reasons discussed with regard to claim 13, at least one element of claim 14 is not taught or suggested by Kim in view of Kumar (page 15).

The Examiner respectfully disagrees. The rejection of claims 13 and 14 have been revised above and the Examiner has addressed Applicant's arguments above with respect to claim 13.

44. As to **Claim 8**, Applicant argues that claim 8 is not taught or suggested by the prior art for reasons discussed above with regards to claim 1 (page 15).

The Examiner respectfully disagrees. The arguments with respect to claim 1 have been addressed above.

45. Applicant's arguments, see pages 11-14 and 15-16 filed 11/7/08, with respect to Claims 10-12 and 17 have been fully considered and are persuasive. The rejection of Claims 10-12 and 17 in view of the prior art of record have been withdrawn.

Conclusion

46. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

47. Kite et al (US Patent 5,737,517) teaches the function testing of service control point and service data point software modules using a UNIX environment.

48. Beeker et al (US Patent 6,321,347) teaches a network testing system including a message compiler to create a test message and a communicator to transmit the test message to a component under test.

49. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary C. Jacob whose telephone number is 571-272-6249. The examiner can normally be reached Tuesday-Thursday, 7AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Mary C Jacob/

Examiner, Art Unit 2123

/M. C. J./

1/13/09